

Grammar School, and its Manual Training High School, now approaching completion.*

* When a patient is discharged from the hospital a printed circular issued by the Board of Health is sent to his home, which contains this instruction:

"Advice to the parents of patients recently discharged from the Brookline Hospital for Diphtheria and Scarlet Fever:

"1. To avoid any possible danger of the communication of scarlet fever or diphtheria to other members of the family, it is much safer for any person who has just been discharged from the wards used for these diseases to sleep alone for at least two weeks.

"2. These diseases are especially likely to be spread by means of a discharge from the ear or nose long after the patient is otherwise entirely well. Therefore, if at any time during two weeks after leaving the hospital the patient shows any such trouble, he should immediately be seen by the family physician, and in the meantime should keep as much as possible away from other children. He should not use the same towel, brush, comb, or any toilet article that others use. When there is any such discharge, handkerchiefs, etc., that are used should be burned when it is possible; when this is not possible, they should be thoroughly boiled. It is better that separate toilet articles be used, even if there is no apparent trouble.

"This advice is especially important in cases of scarlet fever."

HOSPITAL ECONOMICS, TEACHERS COLLEGE, N. Y.

(Concluded from page 695)

BIOLOGY AND PHYSICAL EDUCATION 3

THE first part of this course involves a study of the activity of cells, tissues, and organs in various organisms, both plants and animals, including man. The second part of the course considers personal health as a problem in vital economics, the human body as an organic machine, and the aim of personal hygiene to be the provision of the most efficient body mechanism for the life-needs of the individual. The topics include the argument for the careful study of health and hygiene; ideals of health influencing different peoples; structure and functions of the human body; changes in the organism due to evolution and civilization and the health problems arising from these changes; conditions necessary to the perfect state of the body and the activity of the various functions; causes of weakness, injury, degeneration, and disease; improvement of health and prevention of disease by hygienic means.

BLOOD AND LYMPH

(Lesson IV.—Huxley.)

1. Drop of frog's blood spread out on glass slide, covered, and edge of cover sealed with vaseline. Examine red and white corpuscles in fluid

plasma (drawings). Use low and highest powers. Stain with iodine-eosine. Examine prepared slides of blood from frog or other amphibians.

2. Following directions on page 119 in Huxley's "Lessons," mount drops of your own blood. Study as directed on pages 119-120 and read 122-124. Compare with frog's blood. Give special attention to the white corpuscles.

3. Demonstration. Lymph from subcutaneous spaces of frog; technique as above. Lymph corpuscles and plasma. Compare with white corpuscles of blood.

4. Demonstration of blood crystals. (See page 125.)

5. Coagulation of blood (pages 136-140).

a. Drop of human or frog's blood spread on cover-glass. Place on moist blotting-paper in a watch-glass and cover to prevent evaporation. Examine in five and again in twenty to thirty minutes, and after last examining wash gently with water to remove the red coloring matter and examine with microscope.

b. Examine tubes in which a larger quantity of blood has been allowed to coagulate. Note serum and clot (top page 137).

c. Examine tube containing blood which has been "whipped" (page 138, top).

d. Examine the fibrin removed from the blood by whipping. Are the threads elastic? Examine some shreds with the microscope.

e. Chemistry of fibrin, defibrinated blood and serum. Demonstrations (pages 134-135). Heat or nitric acid coagulates the albumen of defibrinated blood or diluted serum. Burn blood and serum on platinum or porcelain; first blackens, indicating organic matter, and finally mineral ash remains after burning. Dilute one volume of serum in fifty of water and test for proteid by Xanthoproteic test (nitric acid, white; boil, yellow; ammonia, orange); same with defibrinated blood. Test fibrin in water in tube by Xanthoproteic test.

f. Examine blood prevented from clotting by some volume of saturated solution of magnesium sulphate (page 138b).

g. Examine lymph which has been allowed to coagulate (demonstration).

h. Demonstration showing effect of cold on coagulation. Fresh blood in tube inserted into freezing mixture of ice and salt. Congeals, but not coagulation. Thaw. Freeze again. Thaw a second time and allow to coagulate.